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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/653,070	MIYAMOTO ET AL.
Office Action Summary	Examiner	Art Unit
	NADJA CHONG CRUZ	3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>03 September 2003</u>.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-20</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>03 September 2003</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3 Sept 2003 & 6 Dec 2007</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Status of Claims

1.   This Non-Final action is in reply to the application filed on 3 September 2003.

2.   Claims 1-20 are currently pending and has been examined.

Priority

3.   Applicant's claim for the benefit of a prior-filed application, Foreign Application No. 2002-258850,
        under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

Drawings

4.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference
        character "1" has been used to designate both "Figure 1" and "Input Unit (Reference)" and
        character "2" has been used to designate both "Figure 2" and "Storing Unit (Reference)".
        Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office
        action to avoid abandonment of the application. Any amended replacement drawing sheet should
        include all of the figures appearing on the immediate prior version of the sheet, even if only one
        figure is being amended. Each drawing sheet submitted after the filing date of an application must
        be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR
        1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and
        informed of any required corrective action in the next Office action. The objection to the drawings
        will not be held in abeyance.

5.   Figure "13" should be designated by a legend such as --Prior Art-- because only that which is old
        is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d)
        are required in reply to the Office action to avoid abandonment of the application. The
        replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because **Figures 4-12 do not include any reference sign(s).** Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7.   The disclosure is objected to because of the following informalities:

8.   **Figures 4-12 does not include any reference character(s).** Appropriate correction is required.

9.   The abstract have more than 150 words. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

10.   In the disclosure, on page 15, line 7, it appears to be a misspelling word for same, instead of *dame.*

Claim Rejections - 35 USC § 112

11.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12.   Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

13.   Claim 8 recites the limitation *eleventh additional input* and *a twelfth additional input*. Those limitations are vague and indefinite because those limitations redefine a limitation previously disclosed. Appropriate correction is required.

Claim Rejections - 35 USC § 101

14.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

15.   Claims 19-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As recited, claim 19 is directed toward a computer program embodied on a data medium. However, under the current guidelines of 35 USC 101, computer software <u>must</u> be tangibly embodied on a computer readable medium, and, when executed by a computer processor, perform the steps of the software. In their broadest reasonable interpretation and in light of the specification, claims xx, as recited, can be interpreted to be embodied on abstract mediums such as carrier waves and signals, and therefore not eligible for patent protection. Accordingly, claim 19 is not eligible for patent protection. Claim 20 inherit the same deficiencies as claim 19 and are therefore rejected for the same reasons as claim 19.

<div align="center">**Claim Rejections - 35 USC § 103**</div>

16.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as
set forth in section 102 of this title, if the differences between the subject matter sought to be
patented and the prior art are such that the subject matter as a whole would have been obvious
at the time the invention was made to a person having ordinary skill in the art to which said
subject matter pertains. Patentability shall not be negatived by the manner in which the invention
was made.

17.   The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966),

that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or
        nonobviousness.

18.   Claims 1-2, 6-11 and 15-20 are rejected under 35 U.S.C. 103 (a) as being unpatentable over

Miyamoto (US 5,768,129) in view of Kobayashi et al (US 2004/0236551 A1) hereinafter

"Kobayashi".

Examiner's Note: The Examiner has pointed out particular references contained in the prior art

of record within the body of this action for the convenience of the Applicant. Although the

specified citations are representative of the teachings in the art and are applied to the specific

limitations within the individual claim, other passages and figures may apply. Applicant, in

preparing the response, should consider fully the entire reference as potentially teaching all or

part of the claimed invention, as well as the context of the passage as taught by the prior art or

disclosed by the Examiner.

Claim 1:

Miyamoto as shown discloses the following limitations:

●   *a first input unit that inputs information* (see at least Figure 4, which it illustrates an

input section and column 5, lines 43-45, which teaches that "[t]he Input Section 1

receives inputs of information relating to the contents of each process, environmental impact values of each environmental impact factor, and an explanatory data for environmental impact factors." Miyamoto suggests that input section allows the user to input information);

- *a first information storing unit that stores said information inputted by said first input unit* (see at least Figure 4, which it illustrates a Data Storing Section and column 5, lines 45-49, which teaches that "[t]he data storing section 2 stores data other than the explanatory data for the environmental impact factors inputted from the input section 1." Miyamoto suggests that information is stored related to the contents of each of the processes inputted to the input section);

- *a second input unit that inputs information* (see at least Figure 4, which it illustrates an input section and column 5, lines 43-45, which teaches that "[t]he Input Section 1 receives inputs of information relating to the contents of each process, environmental impact values of each environmental impact factor, and an explanatory data for environmental impact factors." Miyamoto suggests that input section allows the user to input information, it is implicitly disclosed that a system allows to enter more than one input);

- *a second information storing unit that stores said information inputted by said second input unit* (see at least Figure 4, which it illustrates a Data Storing Section and column 5, lines 45-49, which teaches that "[t]he data storing section 2 stores data other than the explanatory data for the environmental impact factors inputted from the input section 1." Miyamoto suggests that information is stored related to the contents of each of the processes inputted to the input section. It is implicitly disclosed that a system storage allows to store more than one input in different tables in a same database, which is well known in database management system);

- *a third information storing unit that stores information about environmental impact value per unit* (see at least Figure 4, which it illustrates an Environmental Impact Assessment Section and column 5, lines 52-56, which teaches that "[t]he environmental impact assessment section 3 provides the total environmental impact values of the product by adding up the environmental impact values of the respective processes based on the inter-relationships between the respective processes." Miyamoto suggests that environmental impact values per unit are stored in the Environmental Impact Assessment Section);

- *a calculation unit that calculates total environmental impact values of said reference system and said targeted system based on said information stored in said first information storing unit, said second information storing unit, and said third information storing unit* (see at least Figure 4, which it illustrates an Environmental Impact Assessment Section and column 4, lines 9-14, which teaches that "[t]he environmental impact assessment section calculates, based on the inter-relationships between the respective processes stored in the data storing section, the total environmental impacts of the product by using the environmental impact values obtained in each process." Miyamoto suggests that a calculation of the total environmental impacts values are obtained);

- *an output unit that outputs said environmental impact values of said reference system and said targeted system* (see at least Figure 4, which it illustrates a Display Section and column 5, lines 56-58, which teaches that "[t]he display section 4 displays the data inputted at the input section 1 and the calculated total environmental impact values." Miyamoto suggests that the output is more than one environmental impact values (e.g., for reference and targeted system));

Miyamoto does not specifically disclose the limitations about information from reference and targeted system, however Kobayashi as shown does:

- *about said reference system; about said targeted system* (see at least Figures 8A, 8B and 9, which they illustrates reference character "S23" "Data input for Bench mark Product" (e.g., targeted system) and "Conventional product" (e.g., reference system) and page 10, ¶ 0152, which teaches that "[r]egarding the aimed elements, the product environmental data of each of a bench mark product (this product may be a product of another competitive company)" (e.g., targeted system) "that is a target product and a self company conventional product" (e.g., reference system) "to be improved is read in from the product environmental information database". Kobayashi suggests that in order to display a comparison between two options (reference and target) as shown in Figures 27-30, information about the conventional product (e.g., reference) and the bench mark product (e.g., target) are inputted into the product environmental information database);

Therefore, it would have been obvious to try, by one of ordinary skill in the art at the time of the invention was made, to enter a plurality of inputs from different system and/ or product and incorporate it into the system of Miyamoto since there are a finite number of identified, predictable, potential solutions (e.g., plurality of inputs into a database) to the recognized need (environmental options to choose) and one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success (environmental impact values).

Claim 2:

The combination of Miyamoto / Kobayashi teaches the limitations of Claim 1, as explained above. Furthermore, Miyamoto teaches that "an input section which inputs text information relating to contents of each of processes representing the life cycle as a plurality of inter-related processes, information relating to inter-relationships between respective processes, factors for environmental impacts arising in each process, and environmental impact values in the factors for environmental impacts" (Miyamoto, see at least column 2, lines 36-42). Miyamoto suggests an input interface to

enter information about product and/or system processes related to environmental issues. Miyamoto does not specifically disclose inputs *about consumption of electric power*. However, Kobayashi as shown discloses the following limitations:

- *wherein said first input unit includes a first additional input unit that inputs information about consumption of electric power expensed by said reference system, and said second input unit includes a second additions input unit that inputs information about consumption of electric power expensed by said targeted system* (see at least Figure 29, which it illustrates a comparison between options B and A which are reference systems comparing them to the bench mark product (e.g., targeted system) "Energy saving/use phase" and page 5, ¶ 0071: which teaches that "the product environmental information database is one in which design evaluation results and material-constituting data of many existing products are collected as a database. As the stored data, there are, for example, "the amount of consumption of the resources", "the amount of consumption of the energy" which Kobayashi suggests inputs about the amount of consumption of electric power (e.g., energy) expensed from conventional product (e.g., reference system) and bench mark product (e.g., targeted system) which they are entered into the product environmental database, therefore, solutions are determined based on the input as shown in Figure 29);

Therefore, it would have been obvious to try, by one of ordinary skill in the art at the time of the invention was made, to enter a plurality of inputs from different system and/ or product about consumption of the energy and incorporate it into the system of Miyamoto since there are a finite number of identified, predictable, potential solutions (e.g., plurality of inputs into a database) to the recognized need (environmental options to choose) and one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success (environmental impact values from consumption of the energy).

Claim 6:

The combination of Miyamoto / Kobayashi teaches the limitations of Claim 1, as explained above. Furthermore, Miyamoto teaches that "an input section which inputs text information relating to contents of each of processes representing the life cycle as a plurality of inter-related processes, information relating to inter-relationships between respective processes, factors for environmental impacts arising in each process, and environmental impact values in the factors for environmental impacts" (Miyamoto, see at least column 2, lines 36–42). Miyamoto suggests an input interface to enter information about product and/or system processes related to environmental issues. Miyamoto does not specifically disclose inputs *about consumption of electric power*. However, Kobayashi as shown discloses the following limitations:

- *wherein said first input unit includes a ninth additional input unit that inputs information about network services related to said targeted system, and said second input unit includes a tenth additional input unit that inputs information about network services related to said reference system* (see at least Figure 29, which it illustrates a comparison between options B and A which are reference systems comparing them to the bench mark product (e.g., targeted system) "Resource saving/disposal phase" and page 5, ¶ 0071: which teaches that "the product environmental information database is one in which design evaluation results and material-constituting data of many existing products are collected as a database. As the stored data, there are, for example, "the amount of consumption of the resources", "the amount of consumption of the energy", "the degree of destruction of the ozone layer", "material-constituting date", etc" which Kobayashi suggests inputs about environmental issues and business specific needs (e.g., network services) from conventional product (e.g., reference system) and bench mark product (e.g., targeted system) which they are entered into the product environmental database, therefore, solutions are determined based on the input as shown in Figure 29);

Therefore, it would have been obvious to try, by one of ordinary skill in the art at the time of the invention was made, to enter a plurality of inputs from different system and/ or product about consumption of the energy and incorporate it into the system of Miyamoto since there are a finite number of identified, predictable, potential solutions (e.g., plurality of inputs into a database) to the recognized need (environmental options to choose) and one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success (environmental impact values from network services).

Claim 7:

The combination of Miyamoto / Kobayashi teaches the limitations of Claim 1, as explained above. Furthermore, Miyamoto as shown discloses the following limitations:

- *wherein said first input unit includes a eleventh additional input unit that inputs information about devices or parts to be disposed of related to said targeted system, and said second input unit includes a twelfth additional input unit that inputs information about devices or parts to be disposed of related to said reference system* (see at least column 2, lines 26-42: which teaches that "an environmental assessment system for assessing impacts to environment during a life cycle of a product from its production up to its disposal" where Miyamoto suggests that information is entered about devices or parts to be disposed because "an input section which inputs text information relating to contents of each of processes representing the life cycle" (e.g. production to disposal) "as a plurality of inter-related processes");

Miyamoto does not specifically disclose the limitations about information from reference and targeted system, however Kobayashi as shown does:

- *said reference system; said targeted system* (see at least Figures 8A, 8B and 9, which they illustrates reference character "S23" "Data input for Bench mark Product" (e.g., targeted system) and "Conventional product" (e.g., reference

system) and page 10, ¶ 0152, which teaches that "[r]egarding the aimed elements, the product environmental data of each of a bench mark product (this product may be a product of another competitive company)" (e.g., targeted system) "that is a target product and a self company conventional product" (e.g., reference system) "to be improved is read in from the product environmental information database". Kobayashi suggests that in order to display a comparison between two options (reference and target) as shown in Figures 27-30, information about the conventional product (e.g., reference) and the bench mark product (e.g., target) are inputted into the product environmental information database);

Therefore, it would have been obvious to try, by one of ordinary skill in the art at the time of the invention was made, to enter a plurality of inputs from different system and/ or product and incorporate it into the system of Miyamoto since there are a finite number of identified, predictable, potential solutions (e.g., plurality of inputs into a database) to the recognized need (environmental options to choose) and one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success (environmental impact values).

Claim 8:

The combination of Miyamoto / Kobayashi teaches the limitations of Claim 1, as explained above. Furthermore, Miyamoto teaches that "an input section which inputs text information relating to contents of each of processes representing the life cycle as a plurality of inter-related processes, information relating to inter-relationships between respective processes, factors for environmental impacts arising in each process, and environmental impact values in the factors for environmental impacts" (Miyamoto, see at least column 2, lines 36-42). Miyamoto suggests an input interface to enter information about product and/or system processes related to environmental issues. Miyamoto does not specifically disclose inputs *about amount of devices or parts to be reserved*. However, Kobayashi as shown discloses the following limitations:

- *wherein said first input unit includes a eleventh additional input unit that inputs information about amount of devices or parts to be reserved related to said targeted system, and said second input unit includes a twelfth additional input unit that inputs information about amount of devices or parts to be reserved related to said reference system* (see at least Figure 30, which it illustrates an example of decision-make assisting screen image for product or parts to upgrade, part to reuse (e.g., reserved, not for disposal) for products A, B in comparison with a bench mark product and page 6, ¶ 0072 which teaches the ECP design database includes data regarding the design guidelines and environmental issues, which includes "the maximum use of materials capable of recycle" for upgrade or for reuse. Kobayashi suggests that the amount of devices or parts to be reserved are inputted into the system in order to consider an upgrade or to reuse them);

Therefore, it would have been obvious to try, by one of ordinary skill in the art at the time of the invention was made, to enter a plurality of inputs from different system and/ or product and incorporate it into the system of Miyamoto since there are a finite number of identified, predictable, potential solutions (e.g., plurality of inputs into a database) to the recognized need (environmental options to choose) and one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success (environmental impact values for product or part to be upgraded or reused).

Claim 9:

Miyamoto as shown discloses the following limitations:

- *storing said information about said reference system and said information about said targeted system separately* (see at least Figure 4, which it illustrates a Data Storing Section and column 5, lines 45-49, which teaches that "[t]he data storing section 2 stores data other than the explanatory data for the environmental impact factors inputted from the input section 1." Miyamoto suggests that information is

stored related to the contents of each of the processes inputted to the input section. It is implicitly disclosed that a system storage allows to store more than one input in different tables in a same database, which is well known in database management system);

- *calculating total environmental impact value of said reference system based on said information about said reference system and information about environmental impact value per unit that is previously stored* (see at least Figure 4, which it illustrates an Environmental Impact Assessment Section and column 4, lines 9-14, which teaches that "[t]he environmental impact assessment section calculates, based on the inter-relationships between the respective processes stored in the data storing section, the total environmental impacts of the product by using the environmental impact values obtained in each process." Miyamoto suggests that a calculation of the total environmental impacts values are obtained);

- *calculating total environmental impact value of said targeted system based on said information about said targeted system and said information about environmental impact value per unit* (see at least Figure 4, which it illustrates an Environmental Impact Assessment Section and column 4, lines 9-14, which teaches that "[t]he environmental impact assessment section calculates, based on the inter-relationships between the respective processes stored in the data storing section, the total environmental impacts of the product by using the environmental impact values obtained in each process." Miyamoto suggests that a calculation of the total environmental impacts values are obtained);

Miyamoto does not specifically disclose the limitations about inputting information from reference and targeted system in parallel. However, Miyamoto teaches that Figure 4 illustrates an input section and this "[i]nput Section 1 receives inputs of information relating to the contents of each process, environmental impact values of each environmental impact factor, and an explanatory

data for environmental impact factors."(Miyamoto, see at least column 5, lines 43-45). Miyamoto

suggests that input section allows the user to input information, however Kobayashi as shown

does:

- *inputting information about said reference system and information about said*
  targeted system in parallel (see at least Figures 8A, 8B and 9, which they illustrates
  reference character "S23" "Data input for Bench Mark Product" (e.g., targeted
  system) and "Conventional product" (e.g., reference system) and page 10, ¶ 0152,
  which teaches that "[r]egarding the aimed elements, the product environmental data
  of each of a bench mark product (this product may be a product of another
  competitive company)" (e.g., targeted system) "that is a target product and a self
  company conventional product" (e.g., reference system) "to be improved is read in
  from the product environmental information database". Kobayashi suggests that in
  order to display a comparison between two options (reference and target) as shown
  in Figures 27-30, information about the conventional product (e.g., reference) and
  the bench mark product (e.g., target) are inputted into the product environmental
  information database. It is implicitly disclosed that information was entered at the
  same time in order to obtain a comparison between options as shown in Figures
  27-30);

Therefore, it would have been obvious to try, by one of ordinary skill in the art at the time

of the invention was made, to enter a plurality of inputs from different system and/ or product and

incorporate it into the system of Miyamoto since there are a finite number of identified,

predictable, potential solutions (e.g., plurality of inputs into a database) to the recognized need

(environmental options to choose) and one of ordinary skill in the art could have pursued the

known potential solutions with a reasonable expectation of success (environmental impact

values).

Claim 10:

The combination of Miyamoto / Kobayashi teaches the limitations of Claim 9, as explained above. Furthermore, Miyamoto as shown discloses the following limitations:

- *further comprising the step of displaying said total environmental impact value of said reference system and said total environmental impact value of said targeted system in parallel at a same time* (see at least Figure 4, which it illustrates a Display Section and column 5, lines 56-58, which teaches that "[t]he display section 4 displays the data inputted at the input section 1 and the calculated total environmental impact values." Miyamoto suggests that the output is more than one environmental impact values (e.g., for reference and targeted system));

Claim 11

As per **Claim 11**, this claim encompasses substantially the same scope as claim 2. Accordingly, claim 11 is rejected in substantially the same manner as claim 2, as described above.

Claim 15

As per **Claim 15**, this claim encompasses substantially the same scope as claim 6. Accordingly, claim 15 is rejected in substantially the same manner as claim 6, as described above.

Claim 16

As per **Claim 16**, this claim encompasses substantially the same scope as claim 7. Accordingly, claim 16 is rejected in substantially the same manner as claim 7, as described above.

Claim 17

As per **Claim 17**, this claim encompasses substantially the same scope as claim 8. Accordingly, claim 17 is rejected in substantially the same manner as claim 8, as described above.

Claim 18

The combination of Miyamoto / Kobayashi teaches the limitations of Claim 9, as explained above. Furthermore, Kobayashi as shown discloses the following limitations:

- *wherein said information about said reference system and said information about said targeted system respectively include at least two of information selected from information about amount of consumption of electric power, information about amount of consumption of papers, information about movement of people, information about transportation properties, information about network services, information about devices or parts to be disposed of, and information about devices or parts to be reserved* (see at least Figure 29, which it illustrates a comparison between options B and A which are reference systems comparing them to the bench mark product (e.g., targeted system) "Resource saving/disposal phase" , "Energy saving/use phase" etc., and page 5, ¶ 0071: which teaches that "the product environmental information database is one in which design evaluation results and material-constituting data of many existing products are collected as a database. As the stored data, there are, for example, "the amount of consumption of the resources", "the amount of consumption of the energy", "the degree of destruction of the ozone layer", "material-constituting date", etc" which Kobayashi suggests inputs about environmental issues from conventional product (e.g., reference system) and bench mark product (e.g., targeted system) which they are entered into the product environmental database, therefore, solutions are determined based on the input as shown in Figure 29);

Therefore, it would have been obvious to try, by one of ordinary skill in the art at the time of the invention was made, to enter a plurality of inputs from different system and/ or product about consumption of the energy and incorporate it into the system of Miyamoto since there are a finite number of identified, predictable, potential solutions (e.g., plurality of inputs into a database) to the recognized need (environmental options to choose) and one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success (environmental impact values).

Claim 19:

Miyamoto as shown discloses the following limitations:

- *accepting inputting of information* (see at least Figure 4, which it illustrates an input section and column 5, lines 43-45, which teaches that "[t]he Input Section 1 receives inputs of information relating to the contents of each process, environmental impact values of each environmental impact factor, and an explanatory data for environmental impact factors." Miyamoto suggests that input section allows the user to input information);

- *storing said information* (see at least Figure 4, which it illustrates a Data Storing Section and column 5, lines 45-49, which teaches that "[t]he data storing section 2 stores data other than the explanatory data for the environmental impact factors inputted from the input section 1." Miyamoto suggests that information is stored related to the contents of each of the processes inputted to the input section);

- *obtaining information about environmental impact value per unit* (see at least Figure 4, which it illustrates an Environmental Impact Assessment Section and column 5, lines 52-56, which teaches that "[t]he environmental impact assessment section 3 provides the total environmental impact values of the product by adding up the environmental impact values of the respective processes based on the inter-relationships between the respective processes." Miyamoto suggests that environmental impact values per unit are stored in the Environmental Impact Assessment Section);

- *calculating total environmental impact value of said reference system based on said information about said reference system and said information about environmental impact value per unit* (see at least Figure 4, which it illustrates an Environmental Impact Assessment Section and column 4, lines 9-14, which teaches that "[t]he environmental impact assessment section calculates, based on the inter-

relationships between the respective processes stored in the data storing section, the total environmental impacts of the product by using the environmental impact values obtained in each process." Miyamoto suggests that a calculation of the total environmental impacts values are obtained);

- *calculating total environmental impact value of said targeted system based on said information about said targeted system and said information about environmental impact value per unit* (see at least Figure 4, which it illustrates an Environmental Impact Assessment Section and column 4, lines 9-14, which teaches that "[t]he environmental impact assessment section calculates, based on the inter-relationships between the respective processes stored in the data storing section, the total environmental impacts of the product by using the environmental impact values obtained in each process." Miyamoto suggests that a calculation of the total environmental impacts values are obtained);

Miyamoto does not specifically disclose the limitations about information from reference and targeted system, however Kobayashi as shown does:

- *about said reference system; about said targeted system* (see at least Figures 8A, 8B and 9, which they illustrates reference character "S23" "Data input for Bench mark Product" (e.g., targeted system) and "Conventional product" (e.g., reference system) and page 10, ¶ 0152, which teaches that "[r]egarding the aimed elements, the product environmental data of each of a bench mark product (this product may be a product of another competitive company)" (e.g., targeted system) "that is a target product and a self company conventional product" (e.g., reference system) "to be improved is read in from the product environmental information database". Kobayashi suggests that in order to display a comparison between two options (reference and target) as shown in Figures 27-30, information about the

conventional product (e.g., reference) and the bench mark product (e.g., target) are

inputted into the product environmental information database);

Therefore, it would have been obvious to try, by one of ordinary skill in the art at the time

of the invention was made, to enter a plurality of inputs from different system and/ or product and

incorporate it into the system of Miyamoto since there are a finite number of identified,

predictable, potential solutions (e.g., plurality of inputs into a database) to the recognized need

(environmental options to choose) and one of ordinary skill in the art could have pursued the

known potential solutions with a reasonable expectation of success (environmental impact

values).

Claim 20

As per **Claim 20**, this claim encompasses substantially the same scope as claim 10. Accordingly,

claim 20 is rejected in substantially the same manner as claim 10, as described above.

19.   Claims 3-5 and 12-14 are rejected under 35 U.S.C. 103 (a) as being unpatentable over the

combination of Miyamoto / Kobayashi in view of Sakurai et al (US 2002/0035550 A1) hereinafter

"Sakurai".

Claim 3:

The combination of Miyamoto / Kobayashi teaches the limitations of Claim 1, as explained above.

Furthermore, Miyamoto teaches that "an input section which inputs text information relating to

contents of each of processes representing the life cycle as a plurality of inter-related processes,

information relating to inter-relationships between respective processes, factors for environmental

impacts arising in each process, and environmental impact values in the factors for environmental

impacts" (Miyamoto, see at least column 2, lines 36-42). Miyamoto suggests an input interface to

enter information about product and/or system processes related to environmental issues.

In addition, Kobayashi teaches that Figure 29, which it illustrates a comparison between options

B and A which are reference systems comparing them to the bench mark product (e.g., targeted

system) "Resource Saving/Disposal Phase" which shows different options and page 5, ¶ 0071,

"the product environmental information database is one in which design evaluation results and material-constituting data of many existing products are collected as a database. As the stored data, there are, for example, "the amount of consumption of the resources" (e.g., consumption of papers) "etc.", which Kobayashi suggests inputs about consumption of resources from conventional product (e.g., reference system) and bench mark product (e.g., targeted system) which they are entered into the product environmental database. The combination of Miyamoto / Kobayashi does not specifically disclose inputs *about consumption of papers expensed.* However, Sakurai as shown discloses the following limitations:

- *wherein said first input unit includes a third additional input unit that inputs information about consumption of papers expensed by said reference system, and said second input unit includes a fourth additional input unit that inputs information about consumption of papers expensed by said targeted system* (see at least page 10, ¶ 0176: which teaches that "the maintenance-information system 33 manages information representing the consumption of power, the consumption of utilized water resources, the consumption of paper resources" where Sakurai suggests inputs information about consumption of papers expensed are stored in a database);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system for assessing impact on environment during life cycle of product of Miyamoto with the computer-aided designing assistant apparatus and method of assisting designing of environmentally conscious product as taught by Kobayashi and the system and method for providing environmental management information of Sakurai because it provides "environmental management information, for efficiently minimizing environmental impacts and facilitating activities for gaining the economical benefit." (Sakurai, see at least page 1, ¶ 0009). Furthermore, Sakurai teaches that facilitate "the appropriate decision making on the management regarding environmental matters, thereby contributing to a reduction in the environmental impacts." (Sakurai, see at least page 1, ¶ 0010);

Claim 4:

The combination of Miyamoto / Kobayashi teaches the limitations of Claim 1, as explained above.
Furthermore, Miyamoto teaches that "an input section which inputs text information relating to
contents of each of processes representing the life cycle as a plurality of inter-related processes,
information relating to inter-relationships between respective processes, factors for environmental
impacts arising in each process, and environmental impact values in the factors for environmental
impacts" (Miyamoto, see at least column 2, lines 36-42). Miyamoto suggests an input interface to
enter information about product and/or system processes related to environmental issues.

In addition, Kobayashi teaches that Figure 29, which it illustrates a comparison between options
B and A which are reference systems comparing them to the bench mark product (e.g., targeted
system) "Waste Reduction/Distribution Phase" which shows different options and page 5, ¶ 0071
"the product environmental information database is one in which design evaluation results and
material-constituting data of many existing products are collected as a database. As the stored
data, there are, for example, "the amount of consumption of the resources" (e.g., movement of
people including time availability and distance) "etc.", which Kobayashi suggests inputs about
consumption of resources from conventional product (e.g., reference system) and bench mark
product (e.g., targeted system) which they are entered into the product environmental database.
The combination of Miyamoto / Kobayashi does not specifically disclose inputs *about
consumption of papers expensed*. However, Sakurai as shown discloses the following limitations:

- *wherein said first input unit includes a fifth additional input unit that inputs
  information about movement of people related to said targeted system, and said
  second input unit includes a sixth additional input unit that inputs information about
  movement of people related to said reference system* (see at least page 12, ¶ 0219:
  which teaches that "[t]he maintenance information system 33 obtains the proportion
  of the number of times the maintenance process is performed for each type of
  product to the total number of times the maintenance process is performed (the
  total number of times the staff have visited the customers' to perform the

maintenance process). The maintenance information system 33 multiplies thus obtained proportion to the value of the entire environmental impact at the maintenance process, thereby deriving the environmental impact at the maintenance process, according to each type of product. Further, the maintenance information system 33 collects the usage context of fossil fuel and chemical materials at points where the maintenance process is performed" which Sakurai suggests that when the staff visit the customer there is a movement of people, in addition the maintenance system store that information with the usage of fossil fuel (e.g., vehicle transportation));

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system for assessing impact on environment during life cycle of product of Miyamoto with the computer-aided designing assistant apparatus and method of assisting designing of environmentally conscious product as taught by Kobayashi and the system and method for providing environmental management information of Sakurai because it provides "environmental management information, for efficiently minimizing environmental impacts and facilitating activities for gaining the economical benefit." (Sakurai, see at least page 1, ¶ 0009). Furthermore, Sakurai teaches that facilitate "the appropriate decision making on the management regarding environmental matters, thereby contributing to a reduction in the environmental impacts." (Sakurai, see at least page 1, ¶ 0010);

Claim 5:

The combination of Miyamoto / Kobayashi teaches the limitations of Claim 1, as explained above. Furthermore, Miyamoto teaches that "an input section which inputs text information relating to contents of each of processes representing the life cycle as a plurality of inter-related processes, information relating to inter-relationships between respective processes, factors for environmental impacts arising in each process, and environmental impact values in the factors for environmental

impacts" (Miyamoto, see at least column 2, lines 36–42). Miyamoto suggests an input interface to enter information about product and/or system processes related to environmental issues.

In addition, Kobayashi teaches that Figure 29, which it illustrates a comparison between options B and A which are reference systems comparing them to the bench mark product (e.g., targeted system) "Waste Reduction/Distribution Phase" which shows different options and page 5, ¶ 0071 "the product environmental information database is one in which design evaluation results and material-constituting data of many existing products are collected as a database. As the stored data, there are, for example, "the amount of consumption of the resources" (e.g., transportation properties) "etc.", which Kobayashi suggests inputs about consumption of resources from conventional product (e.g., reference system) and bench mark product (e.g., targeted system) which they are entered into the product environmental database. The combination of Miyamoto / Kobayashi does not specifically disclose inputs *about consumption of papers expensed*. However, Sakurai as shown discloses the following limitations:

- *wherein said first input unit includes a seventh additional input unit that inputs information about transportation properties related to said targeted system, and said second input unit includes a eighth additional input unit that inputs information about 20 transportation properties related to said reference system* (see at least page 12, ¶ 0214 and page 13, ¶ 0219: which teaches that "the distribution/sales information system 29 collects information representing the environmental impact at the time of transporting products" (e.g., transportation properties) "and information representing the environmental impact at points where products are distributed and sold". Furthermore, Sakurai teaches that "the environmental impact to be directly generated at the time of distribution process is generated when the products are transported" where Sakurai suggests that inputs about transportation properties are entered, because "the environmental-impact information collection system 39 divides the obtained value of the environmental impact by each weight of product,

thereby deriving the environmental impact at the time of transporting each type of products.);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the system for assessing impact on environment during life cycle of product of Miyamoto with the computer-aided designing assistant apparatus and method of assisting designing of environmentally conscious product as taught by Kobayashi and the system and method for providing environmental management information of Sakurai because it provides "environmental management information, for efficiently minimizing environmental impacts and facilitating activities for gaining the economical benefit." (Sakurai, see at least page 1, ¶ 0009). Furthermore, Sakurai teaches that facilitate "the appropriate decision making on the management regarding environmental matters, thereby contributing to a reduction in the environmental impacts." (Sakurai, see at least page 1, ¶ 0010);

Claim 12

As per **Claim 12**, this claim encompasses substantially the same scope as claim 3. Accordingly, claim 12 is rejected in substantially the same manner as claim 3, as described above.

Claim 13

As per **Claim 13**, this claim encompasses substantially the same scope as claim 4. Accordingly, claim 13 is rejected in substantially the same manner as claim 4, as described above.

Claim 14

As per **Claim 14**, this claim encompasses substantially the same scope as claim 5. Accordingly, claim 14 is rejected in substantially the same manner as claim 5, as described above.

Conclusion

20.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

* Miyamoto (US 5,878,433) discloses an environmental load assessing device having an object-oriented database which stores, as objects, parts of at least one product and/or processes in a life cycle of the same.

* Kobayashi (US 7,206,752 B2) discloses a method and apparatus for aiding product life cycle planning and computer program product therefor.

* Miyamoto (US 5,652,708) discloses a method for assessing environmental impact of manufacture and disposal of product.

* Miyamoto (US 2001/0003181 A1) discloses an environmental information exhibiting system.

* Takeyama et al (US 5,852,560) discloses an apparatus for assessing a load that industrial products apply to the environment.

* Grune et al (US 6,490,569 B1) discloses a system for combining life cycle assessment with activity based costing using a relational database software application.

* Hongu et al (US 6,829,743) discloses method of acquiring environment consideration condition information.

* Orr et al (US 5,808,916 discloses a method for monitoring the environment.

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **Nadja Chong** whose telephone number is **571.270.3939**. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **BETH VAN DOREN** can be reached at **571.272.6737**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair <http://pair-direct.uspto.gov >. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

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/Nadja Chong/Examiner, Art Unit 3623

16 June 2008

/C. Michelle Tarae/

Primary Examiner, Art Unit 3623